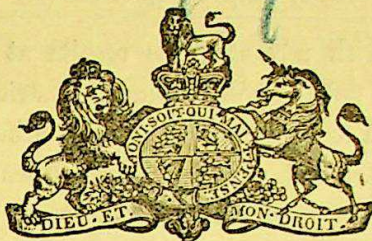


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1864

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RECORDED



A.D. 1864, 8th JULY. N° 1695.

### Impregnating Water for Brewing.

LETTERS PATENT to Alfred Blake, of the Castle Brewery, Newport, Monmouthshire, for the Invention of "IMPROVING WATER FOR THE PURPOSES OF BREWING, AND BEER PRODUCED THEREFROM."

Sealed the 3rd January 1865, and dated the 8th July 1864.

PROVISIONAL SPECIFICATION left by the said Alfred Blake at the Office of the Commissioners of Patents, with his Petition, on the 8th July 1864.

I, ALFRED BLAKE, of the Castle Brewery, Newport, Monmouthshire, do hereby declare the nature of the said Invention for "IMPROVING WATER FOR THE PURPOSES OF BREWING, AND BEER PRODUCED THEREFROM," to be as follows:—

I propose to add to the water before it is used for brewing (in quantities varying with the character of the said water and the salts held by it in solution) either pure or diluted sulphuric acid, afterwards mixing a quantity of carbonate of lime or other salts of lime in any well-known form with the said water, so that the acid is neutralised, or the said water may be allowed to filter through a body of small pieces of the said carbonate of lime or chalk, or limestone; by this method pure sulphate of lime may be formed more readily than by ordinary solution, I would remark that although I would recommend the process to be carried out as above stated, I believe the formation of the sulphate of lime as above described may be made to take



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*Blake's Method of Improving Water for Brewing.*

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place, and be attended with advantageous results at an after stage of the process of brewing; I do not therefore intend to restrict myself to the employment of the above system to any one period only, either in the brewing or the fermentation of the beer, and although I recommend sulphuric acid either pure or dilute to be employed, sulphurous acid or any of its compounds may 5 be employed to produce a like effect.

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**SPECIFICATION** in pursuance of the conditions of the Letters Patent, filed by the said Alfred Blake in the Great Seal Patent Office on the 7th January 1865.

**TO ALL TO WHOM THESE PRESENTS SHALL COME, I, ALFRED 10** BLAKE, of the Castle Brewery, Newport, Monmouthshire, send greeting.

**WHEREAS** Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Eighth day of July, in the year of our Lord One thousand eight hundred and sixty-four, in the twenty-eighth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the 15 said Alfred Blake, Her special licence that I, the said Alfred Blake, my executors, administrators, and assigns, or such others as I, the said Alfred Blake, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and 20 vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "**IMPROVING WATER FOR THE PURPOSES OF BREWING, AND BEER PRODUCED THEREFROM,**" upon the condition (amongst others) that I, the said Alfred Blake, my executors or administrators, by an instrument in writing under my, or their, or one of their 25 hands and seals, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent. 30

**NOW KNOW YE**, that I, the said Alfred Blake, do hereby declare the nature of the said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement, that is to say:—

I propose to add to the water before it is used for brewing (in quantities 35 varying with character of the said water, and the salts held by it in solution)



*Blake's Method of Improving Water for Brewing.*

either pure or diluted sulphuric acid, afterwards mixing a quantity of carbonate of lime or other salts of lime in any well-known form with the said water, so that the acid is neutralized, or the said water, already impregnated, may be allowed to filter through a body of small pieces of the said carbonate  
5 of lime or chalk, or limestone; by this method pure sulphate of lime may be formed more readily than by ordinary solution; I would remark that although I would recommend the process to be carried out as above stated, I believe the formation of the sulphate of lime as above described may be made to take place, and be attended with advantageous results at an after stage of the  
10 process of brewing; I do not therefore intend to restrict myself to the employment of the above system to any one period only either in the brewing or the fermentation of the beer, and although I recommend sulphuric acid either pure or dilute to be employed, sulphurous acid or any of its compounds may be employed to produce a like effect.

15 And in order to explain more completely the nature of my said Invention, I now proceed to describe the best means I am acquainted with for carrying the same into practical effect, as follows:—

I first mix the acid with a small quantity of the water, then proceed to add thereto the lime, or by preference, prepared chalk in sufficient quantity to  
20 neutralize the acid, and thus form an artificial sulphate of lime, which will be readily dissolved when placed in the water which is to be used for brewing. In some cases it may be desirable to use with the chalk a small quantity of either potass, magnesia, or soda, so that the sulphates of these may be formed, taking care that the sulphate of lime be considerably in excess.

25 By the above means water employed for brewing may be impregnated quickly with artificial sulphates to any extent required by adding same either before or it may be during heating for mashing or sparging, and I believe that the said solution of the sulphates has the effect of tending to improve the formation of sugar in the mash-tun, and consequently improving the character  
30 of the beer produced from water treated as above described.

But whereas all the above mentioned artificial sulphates are now manufactured soluble and of pure quality by several chemical manufacturers, it may be more convenient to the brewer to procure same from said manufacturers.

35 Having now fully described and set forth the nature and object of my said Invention for "Improving Water for the Purposes of Brewing and Beer produced therefrom," together with the best means I am acquainted with for effecting same, I would remark in conclusion that I hereby declare my Invention to consist in and I claim improving waters for brewing by impregnating same



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*Blake's Method of Improving Water for Brewing.*

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solely with artificial sulphates, obtained either as above stated or in a pure state from the manufacturers of artificial sulphates or otherwise.

In witness whereof, I, the said Alfred Blake, have hereunto set my hand and seal, this Sixth day of January, in the year of our Lord One thousand eight hundred and sixty-five.

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ALFRED BLAKE. (L.S.)

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